

chine wherein a large volume of breading material will be required to be distributed into machine 10 via feed hopper 60, or alternatively to selectively introduce an additional amount of breading material into breading machine 10 during an operating cycle. The feed hopper 60 provides positive feed of breading material into breading machine 10 at a position to enable both bottom and top layers of breading material to be directly and more immediately generated in machine 10. In initial start up, the feed hopper 60 allows machine 10 to operate at full and complete cycle with both bottom and top layers of breading material being generated in the proper amount and proper distribution quickly and easily. During production, if either or both of the top and bottom layers of breading material become weak as to the amount or distribution, additional breading material is quickly and easily added to feed hopper 60 to immediately compensate for the amount and provide proper distribution of added breading material within the breading machine.

Having described preferred embodiments of the breading machine incorporating the present invention, it will be realized that the same is susceptible to various modifications and arrangements of parts without departing from the inventive concept thereof as is defined in the appended claims.

What is claimed is:

1. A coating machine for depositing coating material onto a food product comprising,
  - a elongated frame enclosure having an endless pervious conveyor belt supported therein and extending therealong to define an upper conveyor run providing a product conveyance path and a lower conveyor run,
  - drive means for moving said conveyor belt within said frame enclosure such that said conveyor belt moves in a first direction along said upper conveyor run and in the opposite direction along said lower conveyor run, wherein said drive means includes at least one support roller adapted to engage said conveyor belt,
  - a first hopper means comprising a housing supported on said frame enclosure above said upper conveyor run with distribution means provided in said hopper means for distributing coating material disposed therein across the width of said upper conveyor run,
  - a circular conveyor rotatably supported on said frame enclosure adjacent to said hopper means and said bottom conveyor run having a plurality of pocket means formed therein and opening to the center thereof,
  - conveyance means supported in said frame enclosure and extending transversely across said bottom conveyor run with one end thereof extending into said circular conveyor, and having drive means associated therewith to remove a portion of coating material from said bottom conveyor run to be disposed within said pocket means of said circular conveyor, wherein said pocket means will convey coating material disposed therein to said hopper means with said distribution means accepting the portion of said coating material from said pocket means to be distributed to said hopper means, and said coating material thereafter exiting from said hopper means and onto the food product being carried on said upper conveyor run as said food product passes under said hopper means,

means to provide a bottom layer of coating material on said upper conveyor run comprising a roller means positioned in spaced apart relationship to said support roller and having drive means associated therewith to rotate said roller means in an opposite direction relative to said support roller, wherein said lower conveyor run is adapted to distribute coating material to the space between said roller means and said at least one support roller, such that said coating material will be distributed onto said upper conveyor run by means of the counter rotation of said at least one support roller and said roller means so as to provide a bottom layer of coating material on which food products are positioned to be coated therewith.

2. The coating machine of claim 1, wherein, said roller means is rotated at a first rotational speed and said support roller is rotated at a second rotational speed, wherein said first and second rotational speeds are different.
3. The coating machine of claim 2, wherein said first rotational speed is greater than said second rotational speed to facilitate distribution of said coating material onto said upper conveyor run to form said bottom layer of coating material.
4. The coating machine of claim 1, wherein, said roller means has a smooth outer surface.
5. The coating machine of claim 1, wherein, said roller means has grooves formed in the outer surface thereof.
6. The coating machine of claim 1, wherein, said roller means has a roughened outer surface.
7. The coating machine of claim 1, wherein, said conveyance means is an auger screw supported in said frame enclosure and extending transversely across said bottom conveyor run wherein a portion of said screw contacts excess coating material traveling along said bottom conveyor run so as to convey a portion thereof to said circular conveyor.
8. The coating machine of claim 1, wherein, said conveyance means is a second conveyor belt supported in said frame enclosure and extending transversely across said bottom conveyor run and positioned so as to contact a portion of coating material from said bottom conveyor run and acting to convey said portion to said circular conveyor.
9. The coating machine as in claim 8, wherein, said second conveyor belt is disposed at an inclined position relative to said bottom conveyor run.
10. The coating machine of claim 1, further comprising,
  - a feed hopper means comprising a housing supported on said frame enclosure at a position between said upper conveyor run and said lower conveyor run and having means for conveying a coating material introduced into the housing thereof into said frame enclosure for distribution into a coating cycle within the coating machine.
11. The coating machine of claim 10, wherein, said position of said feed hopper is such that coating material is introduced into said frame enclosure at a point on said lower conveyor run prior to said conveyance means extending transversely across said lower conveyor run.
12. The breading machine of claim 1, wherein, said bottom portion of said frame enclosure forms a pan in which excess coating material is made to fall wherein said lower conveyor run acts to draw